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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/738,325	12/18/2000	Tazu Nomoto	520.39403X00	2246

24956 7590 12/27/2007
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EXAMINER

DESHPANDE, KALYAN K

ART UNIT	PAPER NUMBER
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3623

MAIL DATE	DELIVERY MODE
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12/27/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/738,325

Applicant(s)

NOMOTO ET AL.

Examiner

Kalyan K. Deshpande

Art Unit

3623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Introduction

1. The following is a non-final office action in response to the communications received on October 15, 2007. Claims 12-16 are now pending in this application.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 15, 2007 has been entered.

Response to Amendments

3. Applicants' cancellation of claims 1-5 and 7-10 is acknowledged. New claims 12-16 are acknowledged.

Response to Arguments

4. Applicants' arguments filed on October 15, 2007 have been fully considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 12-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 12-16 recite limitations of using restriction values, target values, and constants to form a linear programming problem to be optimized. These claim further recite that the plans are for supporting "a materials procurement plan, a production plan, and a transportation plan". It is unclear whether the Applicants are claiming an invention that consolidates a linear programming problem that consolidates all of the constraints and weighted averages of each of these plans in to a single solution or whether Applicants are claiming an invention describing a single linear programming problem that can when optimized can be independently applied to each of these plans. For the purposes of examination, Examiner interprets that Applicants are only solving one such plan with the developed optimization methodology.

Claim 15 is further rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. Claim 15, in part, recites "with management indices being the smaller, the better, the display values of coordinates or the length of the rod are made larger in reverse proportion with the magnitude of the value". It is unclear from this language what Applicants are claiming as their invention. For the purposes of examination, Examiner is interpreting claim 15 to be claiming a radar chart or rod graph displaying information.

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 12-16 rejected under 35 U.S.C. 102(b) as being anticipated by Greene (Greene, James H., Production and Inventory Control Handbook, McGraw-Hill, 1997).

As per claim 12, Greene teaches:

A system of production planning, operable in response to a request for production planning from a terminal operated by a user, for supporting generating at least one of a plurality of plans including a materials procurement plan, a production plan, and a transportation plan each used in a production activity beginning with supply of materials until transportation to a production point and/or to a marketing point by a computer, said system comprising (see Greene pp. 9.3-9.13 and 28.3-28.13; where a production plan using a theory of constraints is used to solve production activities ranging from production, to material planning, and to logistics.):

memory means that stores various restriction conditions and a restriction condition equation relating various management indices to each other, said restriction condition being $\text{actual or variable value} = \text{target value} + \text{positive estrangement value from the target or variable value} - \text{negative estrangement from the target or variable value}$, wherein the management indices are derived based on various models including models for storage of parts, semi-products and/or products considered to be in a warehouse, flows of storage into the warehouse and of storage

delivery from the warehouse (see Greene pp. 9.3-9.13 and 28.3-28.13; where the theory of constraints is used to build models representing inventory, the production of parts, and the flow from inventory to production. The use of constraints is the same as restriction conditions. Greene further discusses the implementation of such models on computer systems having a memory.),

input means that accept various constants, information which selects the restriction conditions and the management indices, target value of the selected management indices, weighting coefficient corresponding to each of the selected management indices and flags for selecting whether the actual value is optimized to be equal or greater or less than the target value of the management indices which are input by user upon production planning (see Greene pp. 9.18-9.28, 10.5-10.6, 10.29-10.32, 11.6-11.26, and 28.3-28.13; where users can input constraint information as restriction conditions and requirement information that are target values. The system has pre-determined coefficients for weighting each factor. Each step of the production planning is optimized, including the MRP and inventory which is discussed in the cited passages.),

calculation process means that reads restriction conditional equations corresponding to management indices selected by the user from the memory means, builds an input target value of the selected management indices into the selected restriction conditional equation, multiplies each variable that stores a positive estrangement value or a negative estrangement value by the weighting coefficient and the flags, composes an objective function for minimizing the sum total

of each estrangement value, and solves a linear programming problem that optimizes the objective function (see Greene pp. 9.18-9.28, 10.5-10.6, 10.29-10.32, 11.6-11.26, and 28.3-28.13; where users can input constraint information as restriction conditions and requirement information that are target values. The system has pre-determined coefficients for weighting each factor. Each step of the production planning is optimized, including the MRP and inventory which is discussed in the cited passages.),

output means that display each actual value of the selected management indices, which the calculation process means calculates from solutions of the linear programming problem, on a display of said terminal in a form of a table, a radar chart or a rod graph (see Greene pp. 11.18 and 28.3-28.13; where the results of the optimization are displayed with a table.),

wherein the input means receives input information from the user that are made of management indices to which the user desires change and/or adjusted target values of the management indices (see Greene pp. 9.18-9.28, 10.5-10.6, 10.29-10.32, 11.6-11.26, and 28.3-28.13; where a user uses management indices to determine target values. The target values are adjusted in order to optimize.),

wherein the calculation process means remakes restriction conditional equations and the objective function according to the input information, repeats solving a linear programming problem, and calculating actual values of all the management indices for which an evaluation of trade-offs is necessary (see Greene pp. 9.18-9.28, 10.5-10.6, 10.29-10.32, 11.6-11.26, and 28.3-28.13; where all factors are adjusted as

necessary and re-optimized until the best solution is found. The best solution is a trade-off evaluation of the target values of the indices.),

wherein the input means receives inputs from the user of a judgment that all the calculated actual values of the management indices can be allowed (see Greene pp. 9.18-9.28, 10.5-10.6, 10.29-10.32, 11.6-11.26, and 28.3-28.13; where a user enters values that are acceptable to be optimized.),

wherein the calculation process means calculates at least one of a materials procurement plan, a production plan of the products and/or the semi-products, and a transportation plan according to the final optimal solutions of the linear programming problem (see Greene pp. 9.18-9.28, 10.5-10.6, 10.29-10.32, 11.6-11.26, and 28.3-28.13; where an inventory planning problem and a production plan of products are discussed in the cited passages. Greene further discusses logistics (i.e. transportation) in portions of text not presently cited.), and

wherein the output means outputs said calculated plans (see Greene pp. 9.18-9.28, 10.5-10.6, 10.29-10.32, 11.6-11.26, and 28.3-28.13; where the output is a materials plan, inventory plan, or production plan per the cited portions in Greene.).

As per claim 13, Greene teaches:

The system of production planning, as defined in the claim 12, wherein each of the management indices is a combination of at least one or more of inventory, profit, sales, cost, a rate of operation, fulfilling rate of demands from marketing point, ash which production activity produces, and an efficiency at which the production activity

produces cash (see Greene pp. 9.18-9.28, 10.5-10.6, 10.29-10.32, 11.6-11.26, and 28.3-28.13; where all indices include values for inventory.).

As per claim 14, Greene teaches:

The system of production planning, as defined in the claim 12, wherein the memory means and the calculation process means are set up at a host server, the input means and the output means are set up at the user's terminal connected through the network with the host server (see Greene pp. 28.3-28.13; where the system can be set up as a client/server configuration.).

As per claim 15, Greene teaches:

The system of production planning, as defined in the claim 12, wherein each actual value of management indices is displayed in radar chart form or rod graph form, with the management indices being the smaller, the better, the display values of coordinates or the length of rod are made larger in reverse proportion with the magnitude of the value (see Greene p. 10.22; where a management index is displayed in a bar graph. A bar graph is a rod graph per the specification of the present invention.).

As per claim 16, Greene teaches:

The system of production planning, as defined in the claim 12, wherein the actual values of management indices and past result values of the management indices are displayed on an output means in a form of a radar chart or rod graph (see Greene p. 10.22; where projected and past values of a management index are

displayed on a bar graph. A bar graph is a rod graph per the specification of the present invention.).

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kalyan K. Deshpande whose telephone number is (571) 272-5880. The examiner can normally be reached on M-F 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on (571) 272-6729. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


BETH VAN DOREN
PRIMARY EXAMINER

/kkd/